



**PATENT APPLICATION**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE HONORABLE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of

Johannes Jacobus MEERMAN et al.

Group Art Unit: 1791

Application No.: 10/500,713

Examiner: J. WOLLSCHLAGER

Filed: July 6, 2004

Docket No.: 119567

For: METHOD FOR MANUFACTURING FILAMENTS FROM AN OPTICALLY  
ANISOTROPIC SPINNING SOLUTION AND AIR GAP SPINNING DEVICE

**REPLY BRIEF**

Commissioner for Patents  
P.O. Box 1450  
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Sir:

The following remarks are directed to the new points of argument raised in the  
Examiner's Answer dated May 13, 2010.

In summary, the Examiner alleges that Appellants' arguments are circular and assume the desired outcome at their outset, and argues that a straightforward/plain reading of the specification supports his "clear and reasonable interpretations of the original disclosure that do not suggest the argued configuration." Appellants disagree. The interpretations and configurations argued by the Examiner do not address the understanding of one of skill in the art at the time the application was filed, are bereft of factual support, and are contrary to Declaration evidence of record.

Because the Examiner fails to establish by a preponderance of the evidence that the specification and the two Declarations are insufficient to establish the specification

reasonably conveys to those skilled in the art that the inventors were in possession of the claimed invention as of the filing date, Appellants respectfully request that the Board reverse the rejection of claims 1–7 and the objection to Amended Figure 2.

Below, Appellants respond to various points of argument raised in the Examiner's Answer. To the extent that any argument is not directly or specifically addressed in this Reply Brief, Appellants respectfully requests this Honorable Board to refer to Appellants' Brief on Appeal.

**On page 5 of the Examiner's Answer, the Examiner states that the original drawings filed on July 6, 2004 in no way show or suggest that the slot or diaphragm is positioned at the bottom of the coagulation bath.**

In response, Appellants respectfully submit that there is nothing in the original specification and/or the original figures that establishes that plates 7a and 7b depicted in Figures 2, 4, 5, and 6 do not define the bottom of the coagulation bath. For example, none of the reference numerals are described in the specification as showing the bath bottom. Additionally, there is nothing that indicates that what is below plates 7a and 7b is the coagulation bath. In fact, reference numeral 4, which is described in paragraph [0027] as the coagulation bath, points to an area that is well above plates 7a and 7b in each of Figures 2, 4, 5, and 6. Moreover, there is no mention in the text of the specification of the slot/diaphragm being positioned between the bottom of the bath and the spinneret. Thus, Appellants disagree that original Figures 2 and 4–6 show or suggest that the slot/diaphragm is "at a position other than the bottom of the coagulation bath."

**On page 5 of the Examiner's Answer, the Examiner argues that although the original disclosure provides support for a discharge opening at the bottom of the coagulation bath, this opening is not shown in the original figures.**

Appellants respectfully submit that the opening depicted in each of original Figures 2 and 4–6 is the discharge opening that is defined by a slot or a diaphragm. As pointed out above, nothing in the original disclosure contradicts that plates 7a and 7b depicted in the original figures define the bottom of the coagulation bath. Evidence of record establishes that one of skill in the art would have understood the specification to "clearly describe that the slot or diaphragm is positioned at the bottom of the coagulation bath" and that the spinning device would not operate properly if the slot or diaphragm was positioned anywhere other than at the bottom of the coagulation bath. *See* FACTS 62–67 and 72–74.

**On page 7 of the Examiner's Answer, and again on page 8, the Examiner asserts that Appellants' arguments are circular and assume the desired conclusion at the outset of the analysis.**

In response, Appellants respectfully point out that the analysis of whether the specification complies with the written description requirement is to be conducted from the standpoint of one of skill in the art at the time the application was filed. The foundation of Appellants' analysis comprises a description in the specification of the background of the invention and two Declarations establishing the standpoint of one of skill in the art at the time the application was filed. The Examiner, on the other hand, offers interpretations and hypothetical configurations that apparently stem solely from the Examiner's reading of the specification in a vacuum without reference to the background or the level of skill in the art.

Not only does the Examiner's "analysis" fail to address the standpoint of one of skill in the art at the time the application is filed, the Examiner essentially asserts that (1) consideration of the background of the invention is not relevant (*see* Examiner's Answer, page 5, last paragraph), and (2) the attestations by Dr. Picken in the two Declarations are mere arguments that have no persuasive weight (*see* Examiner's Answer, page 8, lines 3–5).

In response, Appellants submit that the background of the invention is highly relevant to the analysis. As set forth in FACTS 1–16 of the Appeal Brief, the specification in view of the Meerman reference establishes that: (1) Meerman was concerned with the occurrence of coagulation bath liquid splashing up onto the face of the spinneret in spinning devices configured with two or more discharge openings at the bottom of the bath; (2) Meerman identified that the cause of the problem was due to a phenomenon known as "damming up"; (3) Meerman disclosed that coagulant splashing is reduced substantially by making the edges of adjacent discharge openings be on different levels; (4) the inventors of the presently claimed subject matter found that the solution taught by Meerman does not completely reduce coagulant bath movement in large scale operations; and (5) the inventors describe their invention as a "very simple" adaptation of Meerman's spinning field and slot or diaphragm positions. Thus, the standpoint of one of skill in the art would have included, among other things, an understanding of Meerman's invention, an understanding of the problems addressed by Meerman and the present inventors, and the relationship between Meerman's invention and the claimed invention. This background provided by the specification is highly relevant to an analysis of the standpoint of one of skill in the art at the time of the invention which, in turn, is highly relevant to a determination of whether one of skill in the art would have reasonably concluded that the inventors were in possession of the claimed invention at the time of invention.

The facts discussed above are not disputed by the Examiner. Further, the Examiner does not provide any reasoning as to why the background of the invention is not relevant to the analysis.

The Examiner's Answer only briefly refers to the Declarations of Dr. Picken, which the Examiner characterizes as argument that is not persuasive. *See Examiner's Answer*, page 8, lines 3–5. In response, Appellants point out that the opinion evidence given by Dr. Picken

is evidence, not argument. Additionally, the Examiner fails to provide any finding of facts or other evidence that diminishes the probative value of the Declarations. The Declarations clearly and unequivocally establish that one of skill in the art would have clearly understood from the specification that the slot or diaphragm is positioned at the bottom of the coagulation bath, and that the configuration asserted by the Examiner where the slot/diaphragm is positioned somewhere in the middle of the bath between the spinneret and the discharge opening at the bottom of the bath would not have been a reasonable interpretation of the disclosure. *See* FACTS 62–67 and 72–74.

**On page 6 of the Examiner's Answer, the Examiner argues that Appellants' argument that paragraph [0006] establishes that "the geometry of the present invention" is specifically describing the "geometry of the coagulation bath's bottom," is not persuasive in view of "straightforward reading" of the specification because the sentence in paragraph [0006] that refers to the "geometry of the coagulation bath bottom" contains the word "was." The Examiner argues that, in context, the "was" seems to be pointing back to the configuration taught by Meerman, where the adjacent openings in the bottom of the coagulation bath are at different heights. Thus, the Examiner concludes that the "geometry at the coagulation bath's bottom" is not pertinent to the "geometry of the present invention."**

In response, Appellants first reproduce the relevant portion of paragraph [0006] below:

It was found that the extent to which the coagulation bath surface is in motion is highly dependent on the geometry of the coagulation bath's bottom. Particularly, when use is made of more than two spinning fields and a corresponding number of discharge openings in the bottom of the coagulation bath, the extent to which there is

motion at the coagulant surface can be reduced substantially by introducing the geometry of the present invention.

The Examiner appears to be arguing that because the form of the verb "be" used in the first sentence of the above passage is in the past tense, the "geometry of the coagulation bath's bottom" being referred to must be the configuration taught by Meerman. Appellants disagree, for reasons discussed below. But even if taken at face value, it is unclear how the Examiner's argument supports the conclusion that these two sentences do not link the "geometry of the present invention" to the "geometry of the coagulation bath's bottom."

The "geometry of the coagulation bath's bottom" simply refers to spinning devices that have more than two spinning fields and a corresponding number of discharge openings in the bottom the coagulation bath. This is evidenced by the second sentence of the above-quoted passage, which states, "Particularly, when use is made of more than two spinning fields and a corresponding number of discharge openings in the bottom of the coagulation bath ...." Both Meerman's and Appellants' disclosures address the problem of coagulation bath splashing onto the face of the spinneret in devices where edges of adjacent discharge openings are on the same level. *See* FACTS 3–14. Thus, the use of the word "was" refers to the problem addressed by both Meerman and the present inventors.

The first sentence of the above-quoted passage identifies that the extent of the motion of the surface of the coagulation bath is highly dependent on the geometry of the coagulation bath bottom. In other words, this sentence indicates that the extent of surface motion of the coagulation bath can be changed by altering the geometry of the coagulation bath bottom. The second sentence of the above quoted passage clearly indicates that "introducing the geometry of the present invention" substantially reduces the surface motion of the coagulation bath. A "straightforward" and "plain" reading of these sentences makes clear that the "geometry of the present invention" specifically relates to the geometry of the coagulation

bath's bottom. This meaning is emphasized by the fact that the specification indicates that the "present invention" is a very simple adaptation of Meerman's invention. *See* FACTS 14–16 and 78.

**The Examiner argues that the "geometry of the present invention" refers to the location of plates 7a and 7b, which is to be understood in view of original Figure 2. The Examiner acknowledges that the "geometry of the present invention" is "applicable to the configuration wherein adjacent openings are at different heights" but insists that this in no way establishes that the slot/diaphragm corresponds to the discharge opening at the bottom of the bath. *See* Examiner's Answer, paragraph bridging pages 6 and 7.**

In response, Appellants submit that the "geometry of the invention" should be understood in view of the entire disclosure, not just Figure 2 in a vacuum. Further, this understanding must be from the viewpoint of one of skill in the art at the time of the invention.

Paragraphs [0007] and [0008] discuss in detail the "geometry of the present invention." Instead of pertaining to the vertical positioning of the slot or diaphragm in relation to the spinning field as suggested by the Examiner, the "geometry of the present invention" is the shifting of the horizontal position of the slot/diaphragm so that the center of the slot/diaphragm is offset from the horizontal position of the center of a spinning field by a distance  $d$ . *See* FACTS 14–16 and 24–26.

**On page 7 of the Examiner's Answer, the Examiner argues that Appellants' argument that the only antecedent basis for the "slot or diaphragm" described in paragraph [0007] is the discharge opening discussed in paragraphs [0005] and [0006] seems to be premised on the fact that the first time the phrase "slot or diaphragm" is used in the specification, it is preceded with the word "the" instead of "a." The Examiner further contends that Appellants' argument is "somewhat circular in its logic**

**and assumes the desired conclusion at its outset." The Examiner states, "it seems more likely in view of the original disclosure that the 'the' of the 'the slot or diaphragm' in paragraph [0007] was employed in the original because the phrase 'the geometry of the present invention' had been previously employed in paragraph [0006] thereby implicitly disclosing 'the slot or diaphragm' shown, for example, in the original figures."**

In response, Appellants clarify that their argument is not merely premised on the use of the word "the" instead of "a" nor does it assume the desired conclusion at its outset as alleged by the Examiner. Rather, Appellants' argument is based on a "straightforward" and "plain" reading of the phrase, "This object is attained by **adapting the process of the state of the art** as indicated above in such a manner that **the positions of the spinning field and the slot or diaphragm** are such that ...." The term "slot or diaphragm" is used in that phrase in a manner that presupposes that antecedent basis for the term had already been established in the discussion of the process of the state of the art.

The Examiner does not argue that there is no antecedent basis for "the slot or diaphragm" as used in that phrase, but only argues as to where such antecedent basis may be found. As pointed out above, the Examiner argues that the phrase "the geometry of the present invention" used in the preceding paragraph of the specification implicitly discloses the "the slot or diaphragm." Appellants submit that this assertion is an unreasonable attempt to devise an interpretation of the disclosure that can only be reached by starting with his conclusion that the slot or diaphragm is not located at the bottom of the coagulation bath. Up to this point of the specification, there are no references made to the figures nor anything else that supports the Examiner's assertion that "the geometry of the present invention" implicitly discloses the "the slot or diaphragm." In fact, paragraph [0007] is the beginning of the detailed explanation of the "geometry of the present invention" and is provided in the context that it is an adaptation of Meerman.



If paragraph [0007] is analyzed in a vacuum, without the benefit of an understanding of the viewpoint of one of skill in the art, the discussion of the "slot or diaphragm" in the paragraph would seem abrupt, as if it appeared out of the blue. But when viewed from the starting point that the invention is an adaptation of the Meerman geometry, it is apparent that paragraph [0007] presupposes that the slot or diaphragm is a feature or element of Meerman's invention. *See* FACTS 14–21. Meerman discloses that the discharge openings at the bottom of the bath are configured so that edges of adjacent openings are at different heights. Appellants' specification describes that the slot or diaphragm is defined by plates that are at different heights. Because a slot or diaphragm refers to an opening, it is clear that the slot or diaphragm corresponds to the discharge opening disclosed by Meerman.

The Examiner contends that Appellants' arguments with respect to the antecedent basis issue suggest an overweighted interpretation. Although Appellants believe that this factor strongly supports their position that there is support for the slot/diaphragm being located at the bottom of the bath, Appellants acknowledge that one must consider the entire disclosure as understood by one of skill in the art. In view of the entire disclosure, Appellants' position does not create inconsistencies with the other portions of the disclosure, and it is completely supported by the Declaration evidence of record.

On the other hand, the Examiner's position that the slot or diaphragm is not located at the bottom of the bath means that the slot or diaphragm is a completely new feature separate and apart from those taught by Meerman, with no disclosed relationship between it and the Meerman features. Thus, it would follow that if the "present invention" is an adaptation of Meerman's configuration (discharge openings at the bottom of the bath are configured so that edges of adjacent openings are at different heights), then the "present invention" would include both the split-level discharge openings and the split-level plates defining a slot or diaphragm positioned somewhere between the bottom of the bath and the spinneret. But such

an arrangement is not described anywhere in the specification, nor is it shown in the original figures.

Furthermore, it creates issues with portions of the specification that are not easily resolved. One example is the antecedent basis issue discussed above, where it is evident that the Examiner is hard-pressed to find antecedent support for the use of the term "slot or diaphragm" that is different from that asserted by Appellants. A second example resides in the arguments asserted by the Examiner with regard to the disclosure found in paragraph [0033], "The spinning device is preferably closed with a covering plate just above the slot or diaphragm." The Examiner asserts that this is "most reasonably understood to suggest placing a plate on top of the bath." *See* Examiner's Answer, page 9. The Examiner suggests that "just above" means anywhere below the spinning field but above the slot or diaphragm, such as right above the surface of the bath -- i.e., about 10 mm above the slot or diaphragm. *Id.* However, the spinning device includes the spinning field and the slot or diaphragm. *See, e.g.,* original claim 2. Thus it is unclear how the spinning device could be closed by placing a plate just above the bath, because it would not close the slot or diaphragm.

The Examiner alternatively proposes that "a plate with extension legs could be utilized that not only covers the diaphragm/slot, but also extends down to cover the outlet at the discharge opening." *See* Examiner's Answer, page 9. This is another example of the glaring inconsistencies created by adopting his position that the slot or diaphragm is not located at the bottom of the coagulation bath. The Examiner offers no assertions of where such a configuration is suggested by the disclosure from the viewpoint of one of skill in the art, or was known in the art. This is clearly not "a more straightforward interpretation of the disclosure" than Appellants'. *Id.*

Appellants submit that if the slot/diaphragm is located at the bottom of the bath, then it makes perfect sense that the spinning device can be closed by placing a plate just above the

openings, thus preventing the coagulation bath from running through the openings and emptying the bath. Appellants' position is consistent with the original disclosure as a whole, and is supported by the Declaration evidence. None of the configurations asserted by the Examiner in any way comport with "closing" the device, they find no support in the disclosure, and they are contrary to the Declaration evidence.

**On page 8 of the Examiner's Answer, the Examiner argues that paragraphs [0009] to [0011] do not support Appellants' position, because the fact that Meerman describes adjacent openings at the bottom of the bath as having different heights and that the plates that form the slot/diaphragm are also at different heights does not reasonably convey that the slot/diaphragm and the discharge opening correspond with each other.**

As pointed out in the Appeal Brief, paragraphs [0010] and [0011] relate to the configuration depicted in Figure 6. *See* FACTS 39–49 and pages 32–34. The Examiner does not contest this. The Examiner does not dispute the fact that paragraphs [0010] and [0011] refer to discharge openings. The Examiner does not dispute the fact that Figure 6 depicts the slot/diaphragm. Because paragraph [0009] indicates that paragraphs [0010] and [0011] provide an explanation as to why the configuration depicted in Figure 6 results in substantially no motion in the coagulation bath, then the slot/diaphragm must correspond to the discharge opening.

**On pages 10 and 11 of the Examiner's Answer, and elsewhere in the Examiner's Answer, the Examiner reasserts that paragraphs [0018] and [0029] evidence an inconsistency that is fatal to Appellants' position: "It is submitted by the examiner that this 'internal inconsistency' (appellant's characterization) shown by the juxtaposition of the sentences and paragraphs [0018] and [0029] supports the position set forth in the rejection and that the argued configuration is not reasonably conveyed in amended**

**Figure 2 and claims 1-7 to the extent required by the written description requirement."**  
**The Examiner further argues that his interpretation "is the most straightforward and**  
**that it is more reasonable than the 'internal inconsistency' argument set forth**  
**(appellant's characterization of these cited portions of the specification)."**

In response, Appellants submit that their use of the phrase "internal inconsistency" in the Appeal Brief is a characterization of the Examiner's arguments and not an admission that an internal inconsistency exists. Indeed, Appellants do not believe that any inconsistency exists between paragraphs [0018] and [0029], for the reasons made of record in the Appeal Brief. *See* pages 35–37. Furthermore, as also argued in the Appeal Brief, the very sentence relied upon in paragraph [0018] by the Examiner to evidence the alleged inconsistency uses the terms "opening" and "slot or diaphragm" interchangeably.

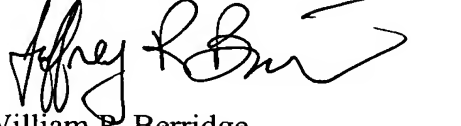
Appellants further disagree that the Examiner's interpretation is the "more reasonable" interpretation as it is contrary to the viewpoint of one of skill in the art as evidenced by the Declarations of Dr. Picken. Not only does Dr. Picken attest that that he interprets this section to pertain to a preferred shape of the openings rather than a preference as to the presence or absence of the openings, he attests that the configuration argued by the Examiner would make operation of the device impossible. *See* FACTS 72–74.

The Examiner's interpretations cannot be seen as reasonable if they do not reflect the understanding of one of skill in the art at the time the application was filed. Nowhere does the Examiner make any assertions as to what one of skill in the art would have understood from the specification at the time the application was filed. Thus, the Examiner fails to provide a single fact that establishes that one of skill in the art would not have reasonably concluded from the original disclosure that inventors had possession of the claimed invention at the time of filing the application.

\* \* \* \* \*

In view of the Appeal Brief and the rebutted arguments above, it is respectfully submitted that the rejection and objection are in error, that claims 1-7 are in condition for allowance, and that Amended Figure 2 does not introduce new matter. Appellants respectfully request this Honorable Board to reverse the rejection of claims 1-7 and the objection to Amended Figure 2.

Respectfully submitted,



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Date: June 30, 2010

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